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EXAMINER

HOGAN, MARY C

ART UNIT

PAPER NUMBER

2123

6

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/823,789

Applicant(s)

LINTON ET AL.

Examiner

Mary C Hogan

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2123

#### DETAILED ACTION

1. This application has been examined.
2. **Claims 1-13** have been examined and rejected.

#### *Specification*

3. The Abstract is objected to because of the use of the recited term "means".
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.
5. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.
6. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

#### *Claim Objections*

7. **Claim 7** is objected to because of the following informalities. Appropriate correction is required.
8. **Claim 7** is a duplicate of **Claim 3**.

#### *Claim Interpretation*

9. **Claim 4** states "time correlation of throughput". It is noted that throughput is defined as measured in kbps, Mbps and Gbps.

#### *Claim Rejections - 35 USC § 102*

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1,2 12 and 13** are rejected under 35 U.S.C. 102(b) as being anticipated by Abu-Amara et al (U.S. Patent Number 5,886,907), herein referred to as **Abu-Amara**.

12. As to **Claim 1**, **Abu-Amara** teaches: a method comprising: obtaining quality of service (QoS) data related to information flow through a data communications network (**Figure 2, element 36 and description**); receiving input data from an application (**Figure 2, elements 32,34,38,40,42 and description**); producing impaired data from the input data, the impaired data being impaired to a level corresponding to the QoS data (**Figure 2, elements 44 and 46 and description, column 5, lines 11-13, 29-30,35-36, column 6, lines 36-40**); and providing the impaired data to the application (**column 6, lines 11-17**).

13. As to **Claim 2**, **Abu-Amara** teaches: the data communications network is a wireless network (**Figure 1 and description**).

14. As to **Claim 12**, **Abu-Amara** teaches: receiving information indicative of a sequence of movements through the data communications network, the information indicative of a sequence of movements through the data communications network being used to access corresponding QoS data (**column 4, lines 19-27**) wherein the delay and loss rate of a cell traversing in the network is indicative of a sequence of movements of data or packets through the communications network, and these parameters can be obtained from a source and used as QoS parameters.

15. As to **Claim 13**, **Abu-Amara** teaches: receiving information indicative of user input to the application, the information indicative of user input to the application being used to produce the impaired data (**column 5, lines 11-13**) wherein average usage rates are calculated and used in the aggregate traffic model. This average usage rate indicates the usage of a service by users, therefore, indicating user input to the application.

#### ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2123

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. **Claims 3,4, and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abu-Amara** as applied to **Claim 1** above, and further in view of Ajib et al (Ajib et al, "Service Disciplines Performance for Best-Effort Policies in Packet-Switching Wireless Cellular Networks", Proc. of IEEE VTC'00, 15-18 May 2000), herein referred to as **Ajib**.

19. As to **Claims 3,4 and 7**, **Abu-Amara** teaches QoS data including maximum cell loss rate, maximum delay and maximum jitter that each cell may experience during network transversal (**column 3, lines 46-51**).

20. **Abu-Amara** does not expressly teach the QoS data includes information indicative of a distribution of throughput.

21. **Ajib** teaches QoS parameters including throughput (**page 1446, column 1, paragraph III, sentence 2**) where throughput is used as a measure of performance in a wireless network while simulating various traffic applications since the throughput indicates the maximum bit rate and mean bit rate requested by the user and the average value of global throughput indicates the quantity of data received correctly (**page 1445, abstract, page 1446, column 2, first 4 sentences, page 1447, section V, (i)**). Since throughput is typically measured in kbps, Mbps and Gbps, the QoS data is indicative of a time correlation of throughput.

22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the QoS parameters as taught in **Abu-Amara** to include a measure of throughput as taught in **Ajib** since throughput can be used as a measure of performance in a wireless network while simulating various traffic applications since the throughput indicates the maximum bit rate and mean bit rate requested by the user and the average value of global throughput will indicate the quantity of data received correctly as taught in **Ajib** (**page 1445, abstract, page 1446, column 2, first 4 sentences, page 1447, section V, (i)**).

23. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abu-Amara** as applied to **Claim 1** above, and further in view of Durgin et al, (Durgin et al, "Measurements and Models for Radio Path Loss and Penetration Loss in and Around Homes and

Art Unit: 2123

Trees at 5.85 GHz”, IEEE Transactions on Communications, Vol. 45, No. 11, November 1998), herein referred to as **Durgin**.

24. As to **Claims 5 and 6**, **Abu-Amara** teaches QoS data can be determined from individual sources or may be pre-determined by international standard bodies such as the International Telecommunication Union-Telecommunication (ITU-T) (**column 4, lines 25-31**).

25. **Abu-Amara** does not expressly teach the QoS data includes information empirically determined and the QoS data includes information modeled from empirically determined data.

26. **Durgin** teaches gathering path loss measurement data and using this data to build measurement-based empirical path loss models to aid in the development of futuristic outdoor-to-indoor residential communication systems for wireless internet access, wireless cable distribution and wireless local loops (**page 1484, abstract, page 1485, column 1, first paragraph**).

27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the QoS parameters as taught in **Abu-Amara** to include data empirically determined and modeled since this data can be used to aid in the development of futuristic outdoor-to-indoor residential communication systems for wireless internet access, wireless cable distribution and wireless local loops (**page 1484, abstract, page 1485, column 1, first paragraph**) as taught in **Durgin**. Further, it is noted that obtaining the data in this manner would be an alternative to obtaining the data through international standard bodies such as the International Telecommunication Union-Telecommunication and may be a way if of determining information from individual sources as taught by **Abu-Amara**.

28. **Claims 8-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abu-Amara** as applied to **Claim 1** above, and further in view of Pitroda et al (U.S. Patent Number 4,149,038) herein referred to as **Pitroda**.

29. As to **Claims 8-11**, **Abu-Amara** teaches producing impaired data from the input data being impaired to a level corresponding to the QoS data (**Figure 2, elements 44 and 46 and description, column 5, lines 11-13, 29-30, 36-36, column 6, lines 36-40**), wherein the QoS data includes cell loss rate, maximum delay and jitter each cell may experience during network transversal (**column 3, lines 46-51**).

30. **Abu-Amara** does not expressly teach the impaired data including intentionally corrupted data packets, intentionally lost data packets, randomly impaired data packets and intentionally delaying data packets.

31. **Pitroda** teaches generating an intentional bit pattern error and an intentional parity bit error which can be injected into a test channel in a multiplex telecommunications switching

Art Unit: 2123

system so that errors in the switching system's information path can be found in real time, allowing the isolation of errors to a minimum number of circuit components in the telecommunications network and as a means to verify that the fault detecting circuitry in the system is working (**abstract, column 1, lines 6-9, 67-column 2, line 3, column 2, line 66-column 3, line 2, column 10, lines 36-46**). It was concluded that intentionally injecting errors into the communications channel encompasses intentionally corrupting, lost, impaired and delayed data packets.

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the impaired data and as taught in **Abu-Amara** to further include the intentionally corrupted, lost, impaired and delayed data packets as taught in **Pitroda** since **Pitroda** teaches injecting errors into a telecommunications network is a way to detect errors in the switching system's information path, allowing the isolation of errors to a minimum number of circuit components in the telecommunications network and further as a means to verify that the fault detecting circuitry in the system is working (**abstract, column 1, lines 6-9, 67-column 2, line 3, column 2, line 66-column 3, line 2, column 10, lines 36-46**).

### *Conclusion*

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

34. Bisdikian et al (U.S. Patent Number 6,205,413) discloses a virtual subscriber system that emulates the actions of subscribers in a network to determine the subscriber's perception of the quality of service.

35. Vetle, Toby J. (Vetle, Toby J., "Simulating your NT Network", Windows IT Pro Magazine, January 1999) teaches simulating a network to estimate the effect that deploying a new application will have on a network.

36. <http://www.pcwebopedia.com/TERM/t/throughput.html> states the definition of throughput.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C Hogan whose telephone number is 703-305-7838 or 571-272-3712 starting mid-October 2004. The examiner can normally be reached on 7:30AM-5PM Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703-305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information

Art Unit: 2123

regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary C Hogan

Examiner

Art Unit 2123

JEAN R. HOMERE  
PRIMARY EXAMINER